

Notice of Allowability

Application No.

10/804,461

Examiner

Tuan T. Nguyen

Applicant(s)

OH, JONG-HOON

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date ____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date ____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Search History Printout.

Neumann
10/31/08

DETAILED ACTION

Allowable Subject Matter

1. Claims **1-14** are allowed.
2. The following is an examiner's statement of reasons for allowance:

The prior art of record fail to disclose a memory comprising, in combination with other cited limitations, a comparator configured to compare the first array address with a second array address read out during a first cycle, said comparator further configured to assert a first signal if the first array address matches the second array address or if the first array address matches an address of a neighboring array of the second array address; and a first circuit configured to generate a refresh array address during a second cycle immediately succeeding the first cycle, wherein the first circuit generates a refresh array address that is different from the second array address or the address of the neighboring array of the second array address as recited in claim 1.

Claims **2-7** are therefore allowed because of their dependency on claim **1**.

The prior art of record also fail to disclose a method for operating a memory device comprising selecting a first array to perform a read operation during a first operation cycle; and selecting a second array to perform a refresh operation during a second operation cycle immediately succeeding the first operation cycle, wherein the second array is different from both the first array and a neighboring of the first array as recited in claim **8**.

Claims **9-14** are therefore allowed because of their dependency on claim **8**.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Killmer et al. (US 2003/0169634) disclose a memory array system having a refresh controller, a refresh address counter.
- b. Ryan et al. (US 6,614,698) disclose a method and apparatus for synchronous data transfers in a memory device with selectable data or address paths.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Nguyen whose telephone number is 571-272-1880. The examiner can normally be reached on Monday - Friday, 8AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Elms can be reached on 571-272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan T Nguyen
Primary Examiner
Art Unit 2824

October 31, 2005